~~91-1003 MB~~

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OCT 2 - 1991

Federal Communications Commission
Office of the Secretary

ORIGINAL

KAYE, SCHOLER, FIERMAN, HAYS & HANDLER

THE McPHERSON BUILDING
901 FIFTEENTH STREET, N.W., SUITE 1100
WASHINGTON, D.C. 20005

(202) 682-3500

425 PARK AVENUE
NEW YORK, N.Y. 10022
(212) 836-8000

1999 AVENUE OF THE STARS

ADMIRALTY CENTRE
TOWER I, 32ND FLOOR
18 HARCOURT ROAD
HONG KONG
(852) 865-7676

Federal Communications Commission
Washington, D. C. 20554

FCC 301

Approved by OMB
3060-0027
Expires 2/28/92
See Page 25 for information regarding public burden estimate

APPLICATION FOR CONSTRUCTION PERMIT FOR COMMERCIAL BROADCAST STATION

For COMMISSION Fee Use Only		For APPLICANT Fee Use Only
	FEE NO: Oct 3 2 [illegible]	Is a fee submitted with this application? ☒ Yes ☐ No
	FEE TYPE:	If fee exempt (see 47 C.F.R. Section 1.1112), indicate reason therefor (check one box):
	FEE AMT:	☐ Noncommercial educational licensee ☐ Governmental entity
	ID SEQ:	FOR COMMISSION USE ONLY FILE NO.

Section I - GENERAL INFORMATION

1. Name of Applicant	Send notices and communications to the following person at the address below:
Julie K. O'Connor	Name Julie K. O'Connor
Street Address or P.O. Box P.O. Box 111333, Suite 317	Street Address or P.O. Box P.O. Box 111333, Suite 317
City: Kamuela; State: HI; ZIP Code: 96743	City: Kamuela; State: HI; ZIP Code: 96743
Telephone No. (Include Area Code) (808) 885-3591	Telephone No. (Include Area Code) (808) 885-3591

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Federal Communications Commission
Office of the Secretary

2. This application is for: ☐ AM ☐ FM ☐ TV

(a) Channel No. or Frequency	(b) Principal Community	City	State
256C		Waimea	HI

(c) Check one of the following boxes:

☒ Application for NEW station

☐ MAJOR change in licensed facilities; call sign: _____ _____

☐ MINOR change in licensed facilities; call sign: _____ _____

☐ MAJOR modification of construction permit; call sign: _____ _____

File No. of construction permit: _____ _____

☐ MINOR modification of construction permit; call sign: _____ _____

File No. of construction permit: _____ _____

☐ AMENDMENT to pending application; Application file number: _____ _____

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. Is this application mutually exclusive with a renewal application? ☐ Yes ☒ No

If Yes, state:

Call letters	Community of License	
	City	State

SECTION VII – CERTIFICATION (Page 5)

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT. U.S. CODE, TITLE 18, SECTION 1001.

I certify that the statements in this application are true and correct to the best of my knowledge and belief, and are made in good faith.

Name of Applicant	Signature
Julie K. O'Connor	Julie K. O'Connor
Date	Title
October 1, 1991	Applicant

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The principal purpose for which the information will be used is to determine if the benefit requested is consistent with the public interest. The staff, consisting variously of attorneys, analysts, engineers and applications examiners, will use the information to determine whether the application should be granted, denied, dismissed, or designated for hearing. If all the information is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Accordingly, every effort should be made to provide all necessary information. Your response is required to obtain the requested authority.

Public reporting burden for this collection of information is estimated to vary from 71 hours 45 minutes to 301 hours 30 minutes with an average of 118 hours 28 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Office of Managing Director, Washington, D.C. 20554, and to the Office of Management and Budget, Paperwork Reduction Project (3060-0027), Washington, D.C. 20503.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION VI – EQUAL EMPLOYMENT OPPORTUNITY PROGRAM

1. Does the applicant propose to employ five or more full-time employees? ☐ Yes ☐ No

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Program Report (FCC 396-A).

SECTION VII – CERTIFICATIONS

1. Has or will the applicant comply with the public notice requirement of 47 C.F.R. Section 73.3580? ☐ Yes ☐ No

2. Has the applicant reasonable assurance, in good faith, that the site or structure proposed in Section V of this form, as the location of its transmitting antenna, will be available to the applicant for the applicant's intended purpose? ☐ Yes ☐ No

If No, attach as an Exhibit, a full explantion. Exhibit No. _____

3. If reasonable assurance is not based on applicant's ownership of the proposed site or structure, applicant certifies that it has obtained such reasonable assurance by contacting the owner or person possessing control of the site or structure.

Name of Person Contacted _____

Telephone No. *(include area code)* _____

Person contacted: *(check one box below)*

☐ Owner ☐ Owner's Agent ☐ Other *(specify)*

The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. *(See Section 304 of the Communications Act of 1934, as amended.)*

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and that all exhibits are a material part hereof and incorporated herein.

The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

In accordance with 47 C.F.R. Section 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

FCC Original

Engineering Exhibit

APPLICATION FOR CONSTRUCTION PERMIT

prepared for
Julie K. O'Connor
Waimea, Hawaii

June 3, 1991

Lahm, Suffa & Cavell, Inc.

Consulting Engineers
3975 University Drive
Suite #450
Fairfax, VA 22030
703-591-0110

ENGINEERING EXHIBIT

Application for Construction Permit

prepared for
Julie K. O'Connor
Waimea, Hawaii

Ch 256C 42 kW (H&V) 860 m

Table of Contents

Section V-B - FM BROADCAST ENGINEERING DATA	FOR COMMISSION USE ONLY File No. _____ ASB Referral Date _____ Referred by _____

Name of Applicant

Julie K. O'Connor

Call letters *(if issued)*	Is this application being filed in response to a window? [X] Yes [ ] No
N/A	If Yes, specify closing date: October 3, 1991

Purpose of Application: *(check appropriate box(es))*

- [X] Construct a new (main) facility
- [ ] Construct a new auxiliary facility
- [ ] Modify existing construction permit for main facility
- [ ] Modify existing construction permit for auxiliary facility
- [ ] Modify licensed main facility
- [ ] Modify licensed auxiliary facility

purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

- [ ] Antenna supporting-structure height
- [ ] Effective radiated power
- [ ] Antenna height above average terrain
- [ ] Frequency
- [ ] Antenna location
- [ ] Class
- [ ] Main Studio location
- [ ] Other *(Summarize briefly)*

File Number(s) _____

1. Allocation:

Class [redacted]

SECTION V-B – FM BROADCAST ENGINEERING DATA (Page 2)

4. Does the application propose to correct previous site coordinates? ☐ Yes ☒ No
If Yes, list old coordinates.

Latitude ° ' "	Longitude ° ' "

5. Has the FAA been notified of the proposed construction? ☐ Yes ☒ No
If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.
Exhibit No. N/A
Not required under FCC or FAA Rules.
Date _____ Office where filed _____

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

	Landing Area	Distance (km)	Bearing (degrees True)
(a)	None		
(b)			

7. (a) Elevation: *(to the nearest meter)*

(1) of site above mean sea level; Obtained from KLUA app. (BPH-900611IC) 1609 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 152 meters

(3) of the top of supporting structure above mean sea level [(a)(1) + (a)(2)] 1761 meters

(b) Height of radiation center: *(to the nearest meter)* H = Horizontal; V = Vertical

(1) above ground 108 meters (H)

108 meters (V)

(2) above mean sea level [(a)(1) + (b)(1)] 1717 meters (H)

1717 meters (V)

(3) above average terrain 860 meters (H)

860 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(b)(3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.
Exhibit No. Fig. 1

9. Effective Radiated Power:
(a) ERP in the horizontal plane 39 kw (H*) 39 kw (V*)

(b) Is beam tilt proposed? ☒ Yes ☐ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.
Exhibit No. Fig. 4
42 kw (H*) 42 kw (V*)

*Polarization

SECTION V-B – FM BROADCAST ENGINEERING DATA (Page 3)

10. Is a directional antenna proposed? ☐ Yes ☒ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of the relative field. Exhibit No. N/A

11. Will the proposed facility satisfy the requirements of 47 C.F.R. Sections 73.315(a) and (b)? ☒ Yes ☐ No

If No, attach as an Exhibit a request for waiver and justification therefor, including amounts and percentages of population and area that will not receive 3.16 mV/m service. Exhibit No. N/A

12. Will the main studio be within the protected 3.16 mV/m field strength contour of this proposal? ☒ Yes ☐ No

If No, attach as an Exhibit Justification pursuant to 47 C.F.R. Section 73.1125. Exhibit No. N/A

13. (a) Does the proposed facility satisfy the requirements of 47 C.F.R. Section 73.207? ☒ Yes ☐ No

(b) If the answer to (a) is No, does 47 C.F.R. Section 73.213 apply? N/A ☐ Yes ☐ No

(c) If the answer to (b) is Yes, attach as an Exhibit a justification, including a summary of previous waivers. Exhibit No. N/A

(d) If the answer to (a) is No and the answer to (b) is No, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose. Exhibit No. N/A

(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following: Exhibit No. N/A

(1) Protected and interfering contours, in all directions (360°), for the proposed operation.
(2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as the transmitter location.
(3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
(4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
(5) The official title(s) of the map(s) used in the exhibits(s).

14. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast *(except citizens band or amateur)* radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference? ☒ Yes ☐ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. *(See 47 C.F.R. Sections 73.315(b), 73.316(e) and 73.318.)* Exhibit No. Stmt A

15. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction V. The map must further clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No. Fig. 2

16. Attach as an Exhibit *(name the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No. Fig. 3

(a) the proposed transmitter location, and the radials along which profile graphs have been prepared;

(b) the 8.16 mV/m and 1 mV/m predicted contours; and

(c) the legal boundaries of the principal community to be served.

17. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

(land area only)
Area 4,928 sq. km. Population 33,047

18. For an application involving an auxiliary facility only, attach as an Exhibit a map *(Sectional Aeronautical Chart or equivalent)* that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No. N/A

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license.

19. Terrain and coverage data *(to be calculated in accordance with 47 C.F.R. Section 73.313)*

Source of terrain data: *(check only one box below)*

☐ Linearly interpolated 30-second database ☐ 7.5 minute topographic map

(Source: _____)

SECTION V-B – FM BROADCAST ENGINEERING DATA (Page 5)

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances	
		To the 3.16 mV/m contour (kilometers)	To the 1 mV/m contour (kilometers)
38 *	935	68.9	93.8
0	1306	75.5	101.0
45	844	66.6	91.4
90	132	29.5	48.1
135	-99	14.4	25.5
180	788	65.0	89.7
225	1306	75.5	101.1
270	1370	76.6	101.9
315	1230	74.3	99.9

*Radial through principal community, if not one of the major radials. This radial should NOT be included in the calculation of HAAT.

20. Environmental Statement *(See 47 C.F.R. Section 1.1301 et seq.)*

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? ☐ Yes ☒ No

If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311. Exhibit No.

If No, explain briefly why not. Categorically excluded per 1.1306. See Statement B.

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name *(Typed or Printed)*	Relationship to Applicant *(e.g., Consulting Engineer)*
Ann Gallagher	Consulting Engineer
Signature: Ann Gallagher	Address *(Include ZIP Code)*: Lahm, Suffa & Cavell, Inc. 3975 University Drive, Suite 450 Fairfax, VA 22030
Date: June 3, 1991	Telephone No. *(Include Area Code)*: (703) 591-0110

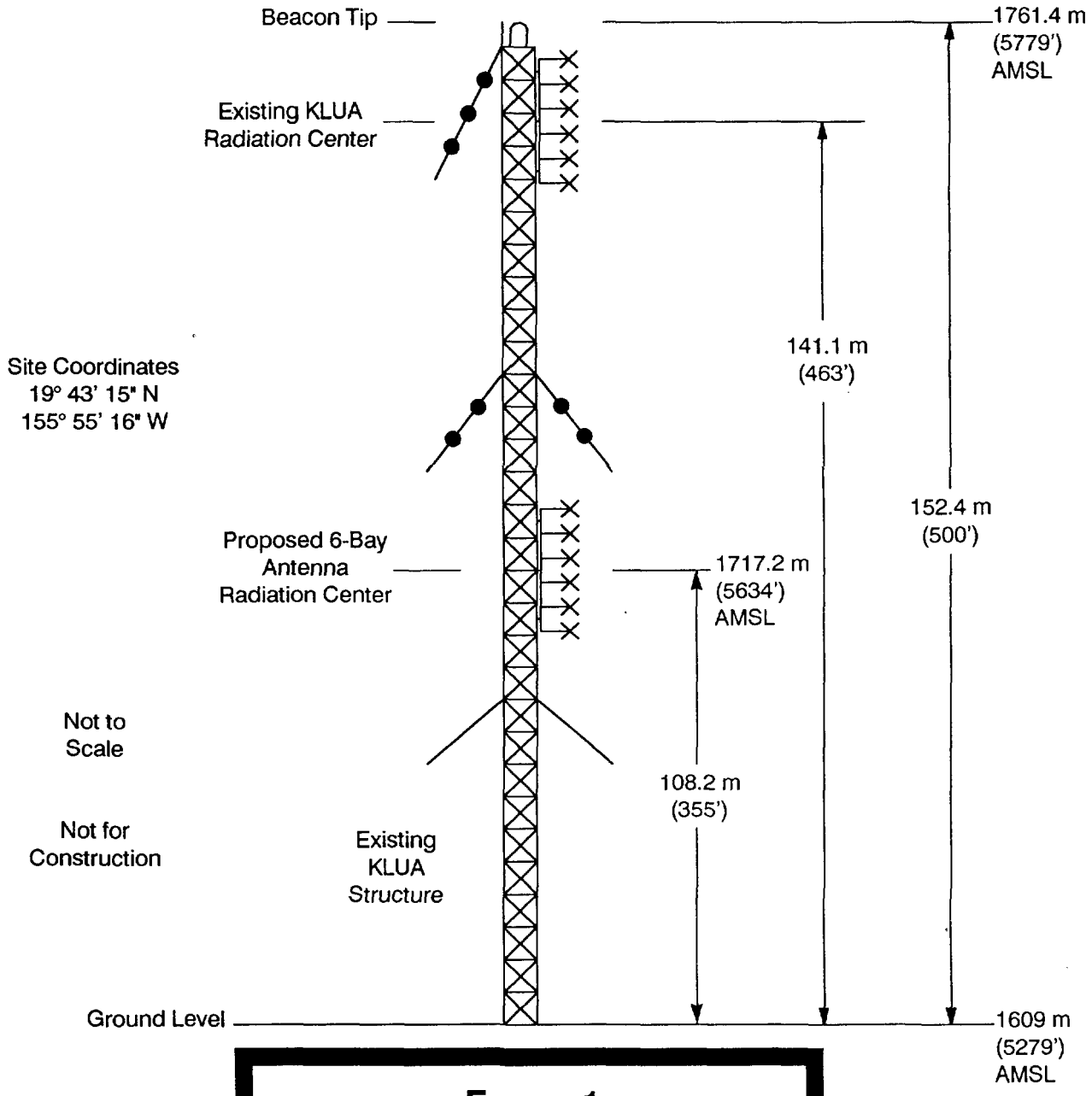


FIGURE 1
ANTENNA SYSTEM ELEVATION PLAN

prepared May 1991 for
Julie K. O'Connor
Waimea, Hawaii

Ch 256C 42 kW 860 m

Lahm, Suffa & Cavell, Inc.
Consulting Engineers - Fairfax, VA

Statement A

INTERFERENCE CONSIDERATIONS

prepared for
Julie K. O'Connor
Waimea, Hawaii

Ch 256C 42 kW (H&V) 860 m

It is proposed to locate the Pierless transmitter at a multi-user site atop Cadillac Mountain in Waimea, Hawaii. The site is remote with respect to any residence or other broadcast transmitter now operating. Blanketing interference, if it occurs, will not affect any residents, as there are no homes near the site. Any effect will be confined to visitors to the immediate vicinity of the site. There are other non-broadcast facilities located at the site; the low power and diverse frequencies involved make interference unlikely. No AM facilities are located within 3 kilometers of the site and no other FM stations are located within 10 kilometers of the site. Although no adverse effects are expected, the applicant has been made aware that interference may occur as a result of the operation proposed herein. Pierless is aware of the obligation to take steps to remedy any interference, as required by the FCC Rules. Such steps might include, but are not limited to, the installation of filters on affected equipment.

Statement B

ENVIRONMENTAL CONSIDERATIONS

prepared for
Julie K. O'Connor
Waimea, Hawaii

Ch 256C 42 kW (H&V) 860 m

The instant proposal is not believed to have a significant environmental impact as defined under Section 1.1306 of the Commission's Rules. Consequently, preparation of an Environmental Assessment is not required. The following information was provided by the applicant.

Nature of The Proposal

This application proposes construction of a new FM radio station near Kaupulehu Crater in Acadia National Park, Maine. Although the site is located within a National Park, preparation of an environmental assessment is not believed to be required. Pierless submits the following information for consideration by the Commission.

Pierless proposes to side mount a two bay Shively model 6810 antenna near the top of an existing 50 foot antenna structure owned by the National Park Service (NPS). An existing NPS antenna will be relocated at a lower elevation on the tower. There will be no change in the overall structure height if this construction permit is granted and construction is completed.

In addition to the tower proposed for use by Pierless, the proposed site has two buildings which support roof mounted antennae. These buildings and antennae are used by a variety of Federal, State and local governmental agencies for land mobile transmitters. The site is, therefore, a developed radio transmitting site. Among other users at the site are National Park Service, FBI, Maine State Police, Hancock County Sheriff's Department, and the Bar Harbor Police Department.

Pierless has negotiated an agreement with the National Park Service for use of the site. Mr. John Hauptman, Supervisor of Acadia National Park has consented to the proposed Pierless installation. The applicant has made a promise to accept and encourage other radio users to locate at the site. Pierless believes that at least one, if not more, broadcast facilities can operate from this location.

Pierless intends to construct a building in accordance with Park Service guidelines, so as to minimize the visual impact of the proposed construction. This may, ultimatly entail construction of a below ground building. The site area, including the existing buildings and NPS tower, is currently fenced.

Section 1.1306(b), Note 1, indicates that the use of existing towers is environmentally desirable. Since the site currently accommodates a multitude of radio users, and use of the site by Pierless has been approved by the National Park Service, it is believed that preparation of an environmental assessment is not required, and this proposal may be categorically excluded from environmental processing.

Human Exposure to Radiofrequency Radiation

The proposed transmitting system will comply with the guidelines for human exposure to RF radiation contained in ANSI guideline C95.1-1982. The FCC has adopted the ANSI guideline as the maximum allowable exposure levels for humans in the vicinity of transmitting antennas.

The proposed installation has been studied using the criteria set forth in FCC OST Bulletin No. 65 criteria. Under Commission policy, a facility may be presumed to comply with FCC environmental rules if the calculated RF energy level at any point on the ground does not exceed the ANSI C95.1-1982 Radio Frequency Protection Guide (ANSI RFPG).

The tower proposed for use herein will support both the proposed Pierless operation and a land mobile (intermittent duty) antenna. Pierless has proposed use of a two bay Shively Model 6810 antenna at a height of 13.2 meters above ground. When the vertical radiation characteristics of this antenna are employed, the RF exposure levels at 2 meters above the ground will not exceed the ANSI guideline. The other transmitters located at the site are relatively low power (approximately 100 watts) and operate with intermittent duty cycles. These may be excluded from consideration.

Figure 4 is the manufacturer's elevation pattern for the Shively 6810 2-bay antenna. Table 1 presents a tabulation of the elevation pattern, along with a detailed determination of electromagnetic exposure levels 2 meters above the ground. For purposes of this evaluation, the ground around the supporting structure is assumed to be flat.

Exposure levels were computed for points two meters above ground level, with points being located based on intervals of depression angles from the proposed antenna radiation center. The direct path (slant distance) from the radiation center was used in the formulae of OST Bulletin No. 65 for determination of the exposure level at two meters above ground.

As shown in Table 1, the worst case exposure level is well below the 1000 uW/cm^2 ANSI guideline limit for continuous exposure. Thus, Pierless will comply with the Commission's Rules regarding human exposure to RF radiation.

The site is currently fenced to limit access to authorized personnel only. Pierless will post signs to alert workers that potential RF hazards may exist above ground level. A policy will be developed in conjunction with NPS which sets forth positive measures to ensure worker safety. Such measures might include, but are not limited to, reduction of power or station shutdown.

In the event that other users seek to operate from this site, Pierless will cooperate to the extent required by the FCC Rules and NPS to ensure worker and public safety. It is anticipated that other users could be accommodated with lower power levels, tower height increases (if approved by NPS) and/or specially designed antennas.

Conclusion

Based on the above information, it is believed that the instant proposal may be categorically excluded from environmental processing under Section 1.1306 of the Rules. Pierless will supply further information upon request.

Table 1

CALCULATED RF ENERGY LEVELS

prepared for
Julie K. O'Connor
Waimea, Hawaii

Ch 256C 42 kW 860 m

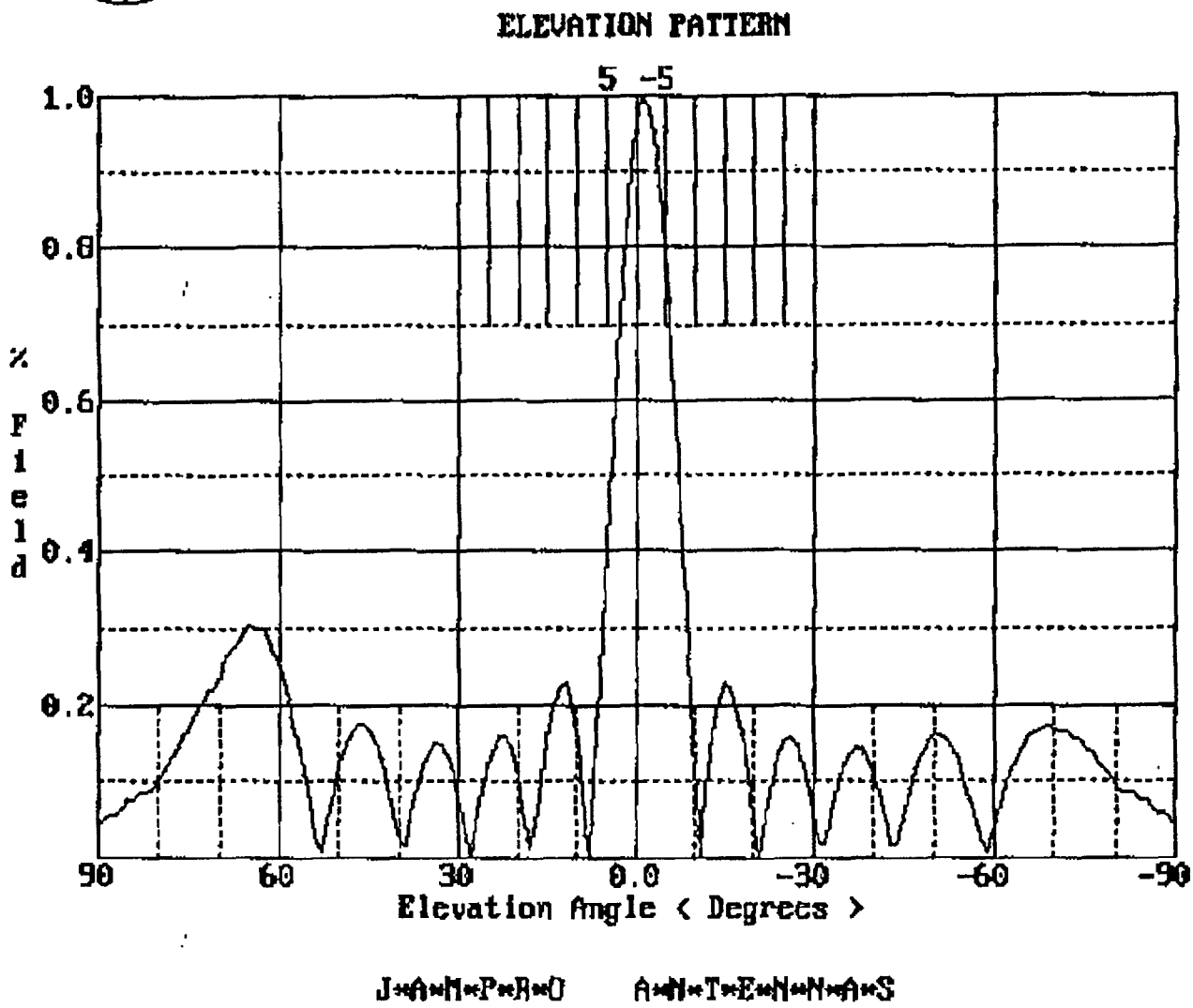
Depression Angle (°)	Relative Field	Slant Distance (m)	RF Level (uW/cm^2)
90	* 0.10	11.4	24.7
80	0.17	11.6	68.9
70	0.34	12.1	253
60	0.45	13.1	378
55	0.49	13.9	399
50	0.47	14.9	319
45	0.43	16.1	229
40	0.32	17.7	105
35	0.20	20.0	32.1
30	* 0.10	22.8	6.2
25	0.21	27.0	19.4
20	0.45	33.3	58.6
15	0.65	44.0	70.0
10	0.84	65.6	52.6
5	** 1.0	131	18.7
0	** 1.0	653	0.8

* Assumed minimum radiation level
** Assumed maximum radiation level

FIGURE 4
ANTENNA ELEVATION PATTERN

prepared May 1991 for
Julie K. O'Connor
Waimea, Hawaii

JAMPRO ANTENNAS, INC.



Customer: _____ date: _____

Frequency: 99.1 Type: 6-Bay FM

Beam tilt: -1.5 Null fill: _____

Notes: Elevation pattern plotted in relative field

Statement C

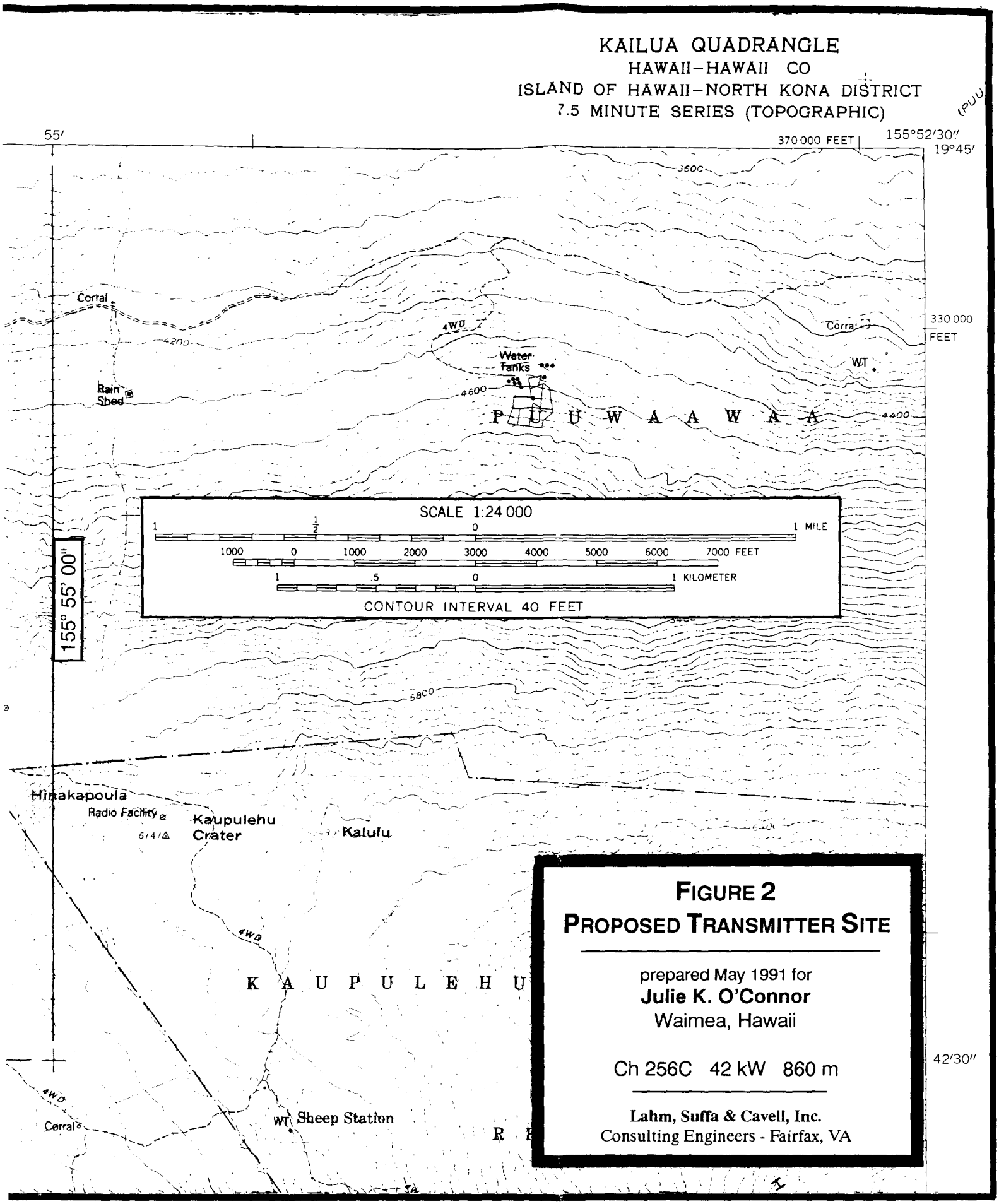
OTHER CONSIDERATIONS

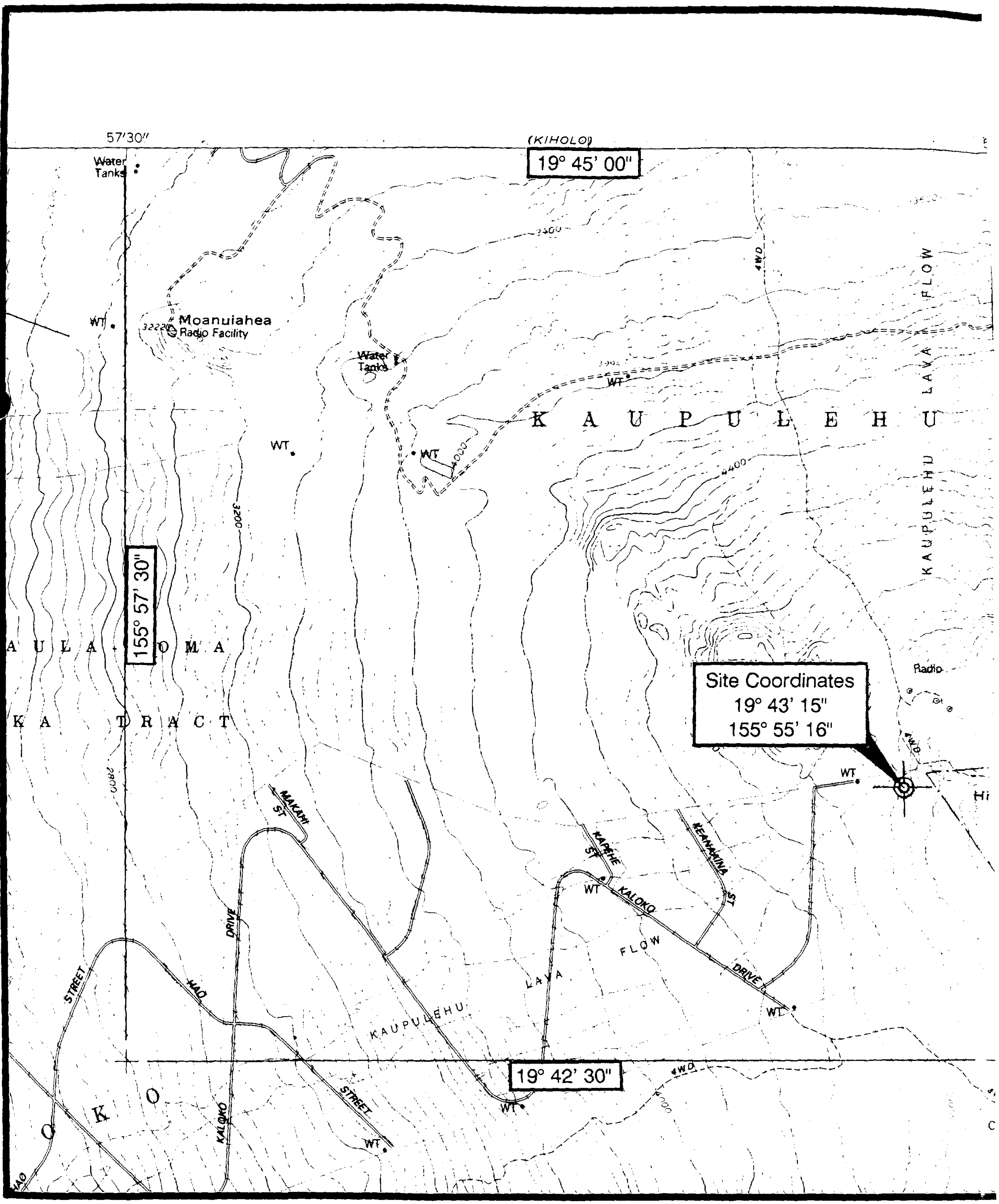
prepared for
Julie K. O'Connor
Waimea, Hawaii

Ch 256C 42 kW (H&V) 860 m

The proposed Pierless site is used by U.S. Governmental agencies and other private land mobile facilities. In preparing this application, it became apparent that some geographic coordinate data for the Park Service tower and other Federal radio facilities differs slightly with respect to the actual tower and building locations. The geographic coordinates provided herein were determined from a detailed description of the site, provided by the applicant. It is clear that the coordinates used by at least one Federal transmitter are wrong. The applicant believes that the coordinates provided herein are the most accurate description of the tower location. In any event, the Federal installations are not regulated by the Commission, and the discrepancy should not impact on this proposal.

The proposed Pierless site is short spaced as a class B operation with respect to a proposed facility upgrade on channel 300 in Skowhegan, Maine. That proposal requests that the Bar Harbor allotment be downgraded to class B1. Since the Bar Harbor allotment has been assigned for some time, it is believed that the Skowhegan proposal is an improper conflicting proposal. Thus, specific consideration of the Skowhegan proposal is not believed


KAILUA QUADRANGLE
HAWAII–HAWAII CO
ISLAND OF HAWAII–NORTH KONA DISTRICT
7.5 MINUTE SERIES (TOPOGRAPHIC)
55′
370 000 FEET
155°52′30″
19°45′
330 000 FEET
42′30″
155° 55′ 00″
Corral
4WD
Water Tanks
WT
Rain Shed
P U U W A A W A A
4600
4400
4200
3600
5800
SCALE 1:24 000
1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 5 0 1 KILOMETER
CONTOUR INTERVAL 40 FEET
Hinakapoula
Radio Facility
6141
Kaupulehu Crater
Kalulu
K A U P U L E H U
Sheep Station
R
FIGURE 2
PROPOSED TRANSMITTER SITE
prepared May 1991 for
Julie K. O'Connor
Waimea, Hawaii
Ch 256C 42 kW 860 m
Lahm, Suffa & Cavell, Inc.
Consulting Engineers - Fairfax, VA


57'30"
(KIHOLO)
19° 45' 00"
Water Tanks
Moanuiahea
Radio Facility
3222
Water Tanks
WT
K A U P U L E H U
KAUPULEHU LAVA FLOW
4WD
3400
4000
4400
3200
2800
A U L A O M A
K A T R A C T
155° 57' 30"
Site Coordinates
19° 43' 15"
155° 55' 16"
Radio
MAKAHI ST
KAPEHE ST
KEANAKIHINA ST
KALOKO DRIVE
DRIVE
STREET
HAO
HAO
LAVA FLOW
KAUPULEHU
19° 42' 30"
STREET
KALOKO
O K O

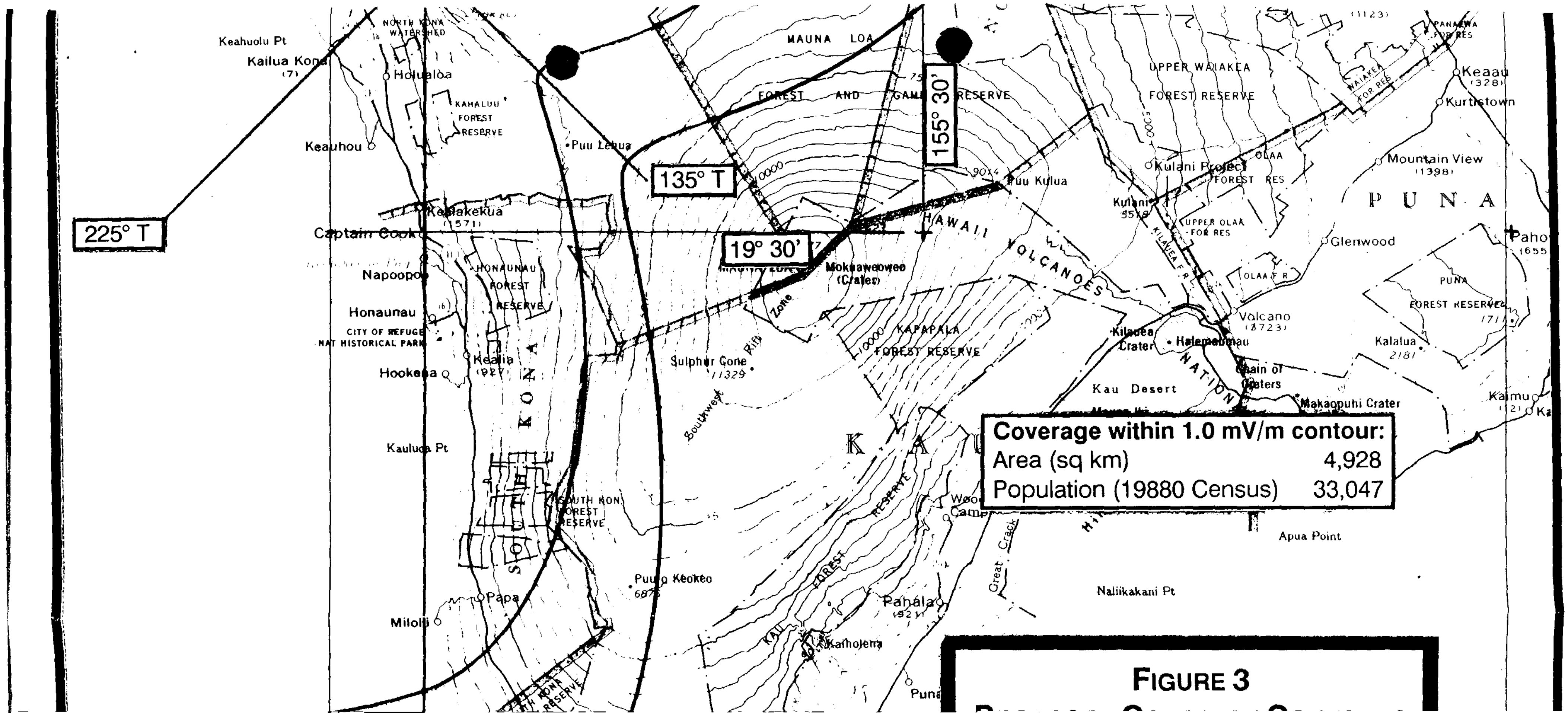
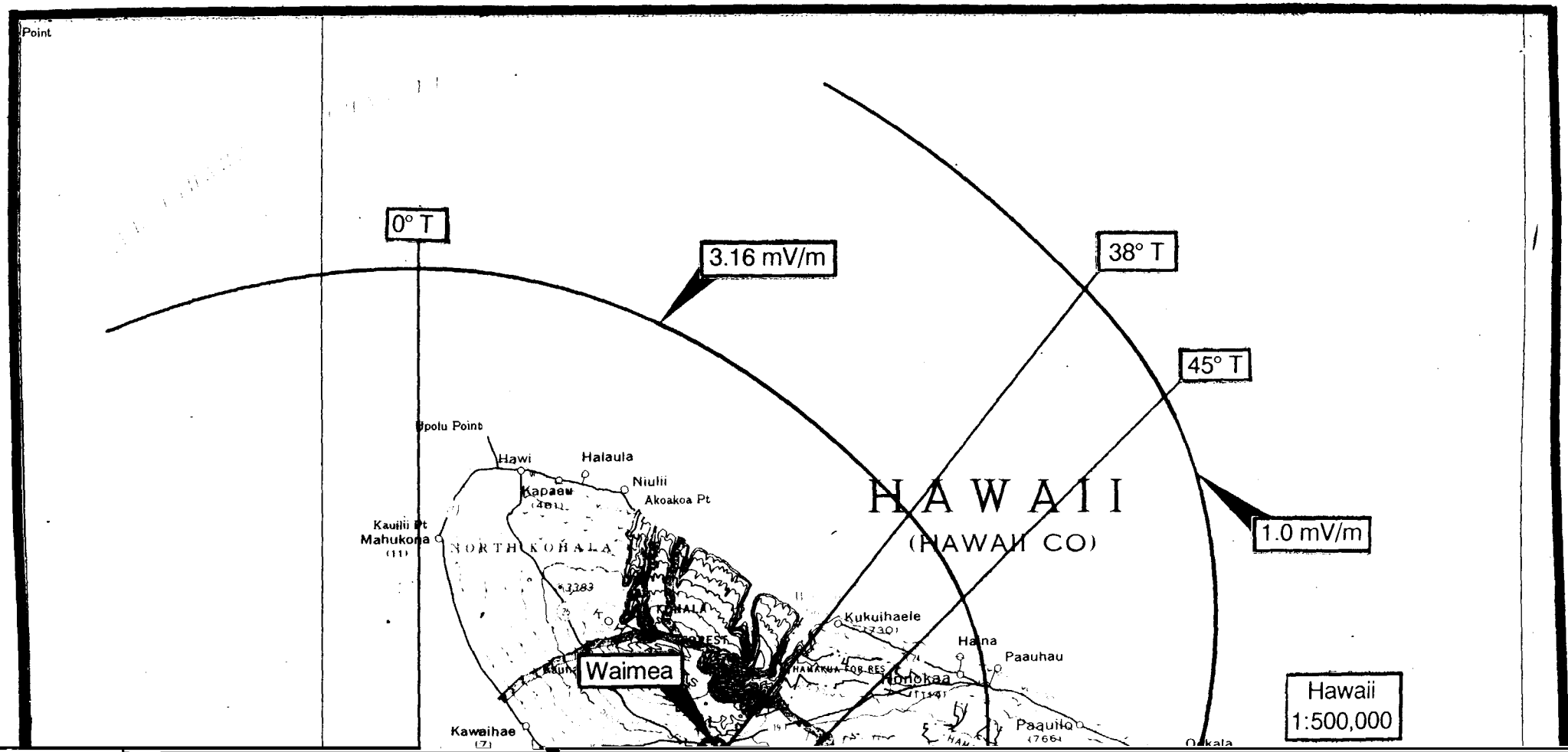

225° T
135° T
155° 30'
19° 30'
Coverage within 1.0 mV/m contour:
Area (sq km) 4,928
Population (19880 Census) 33,047
Keahuolu Pt
Kailua Kona
Holualoa
Keauhou
Kealakekua
Captain Cook
Napoopoo
Honaunau
CITY OF REFUGE NAT HISTORICAL PARK
Hookena
Kealia
Kauluoa Pt
Papa
Miloli
MAUNA LOA
FOREST AND GAME RESERVE
Puu Lehua
Puu Kulua
Mokuaweoweo (Crater)
HAWAII VOLCANOES
KAPAPALA FOREST RESERVE
Sulphur Cone
Southwest Rift Zone
Puu o Keokeo
Pahala
Kaalualu
UPPER WAIAKEA FOREST RESERVE
Kulani Project
Keaau
Kurtistown
Mountain View
PUNA
Glenwood
Volcano
Kilauea Crater
Kau Desert
Chain of Craters
Makaopuhi Crater
Kalalua
Kaimu
Apua Point
Naliikakani Pt
Great Crack
Wood Camp
Pahoa

FIGURE 3


Point
0° T
3.16 mV/m
38° T
45° T
1.0 mV/m
Upolu Point
Hawi
Halaula
Niulii
Kapaau
Akoakoa Pt
Kauilii Pt
Mahukona
NORTH KOHALA
HAWAII
(HAWAII CO)
Kukuihaele
Hana
Paauhau
Waimea
Honokaa
Kawaihae
Paauilo
Hawaii
1:500,000